

AMENDMENTS TO THE CLAIMS

1. (Currently Amended): A liquid crystal display device, comprising:

a gate electrode on a substrate;

a gate insulating film on the substrate and over the gate electrode;

a semiconductor layer on the gate insulating film and over the gate electrode; wherein the semiconductor layer includes a “E”-shaped channel having a width/length ratio of about 8.3 to about 25;

a source electrode and a drain electrode on the semiconductor layer and adjacent the gate electrode, wherein the source electrode and the drain electrode oppose each other and each includes at least one protrusion that extends toward the opposing electrode, and the at least one protrusion of the source electrode extends directly from a data line;

a protective layer on the gate insulating film and over the source and drain electrodes;
and

a pixel electrode on the protective layer, the pixel electrode electrically connected to the drain electrode via a contact hole;

wherein an entire area of the “E”-shaped channel is formed over the gate electrode, the gate electrode underlies a part of the data line, the source electrodes and a part of the drain electrode so that the “E”-shaped channel is formed at parts of the source and drain electrodes facing the protrusion, the at least one protrusion of the source electrode ~~the entirety of the protrusions of the source and drain electrodes~~ is formed within the area of the semiconductor layer[[,]] and ~~the protrusion of the source electrode~~ is parallel to and offset from the at least one protrusion of the drain electrode.

2. (Canceled)

3. (Original): The liquid crystal display device as claimed in claim 1, wherein the semiconductor layer includes:

an active layer on the gate insulating film; and

an ohmic contact layer on the active layer.

4. (Original): The liquid crystal display device as claimed in claim 3, wherein the ohmic contact layer includes an “E”-shaped opening that corresponds to the shape of the channel.

5. (Original): The liquid crystal display device as claimed in claim 3, wherein the active layer is undoped silicon.

6. (Original): The liquid crystal display device as claimed in claim 3, wherein the ohmic contact layer is doped silicon.

7. (Currently Amended): The liquid crystal display device as claimed in claim 1 [[2]], wherein the channel has a width greater than 50 μm .

8. (Canceled)

9. (Original): The liquid crystal display device as claimed in claim 1, wherein the pixel electrode contacts the drain electrode through an opening in the protective layer.

10. (Original): The liquid crystal display device as claimed in claim 1, further including a data line in electrical communication with the source electrode.

11. (Currently Amended): A method of fabricating a liquid crystal display device, comprising:

forming a gate electrode on a substrate;

forming a gate insulating film on the substrate and over the gate electrode;



forming a semiconductor layer on the gate insulating film and over the gate electrode

wherein the semiconductor layer forms a “E”-shaped channel having a width/length ratio of about 8.3 to about 25;

forming a source electrode and drain electrode on the semiconductor layer, wherein the source and drain electrodes oppose each other and each includes at least one protrusion that extends toward the opposing electrode, and the at least one protrusion of the source electrode extends directly from a data line;

forming a protective layer over the source and drain electrodes and over a portion of the gate insulating film; and


forming a pixel electrode on the protective layer, wherein the pixel electrode is electrically connected to the drain electrode via a contact hole;

wherein an entire area of the “”-shaped channel is formed over the gate electrode, the gate electrode underlies a part of the data line, the source electrodes and a part of the drain electrode so that the “”-shaped channel is formed at parts of the source and drain electrodes facing the protrusion, the at least one protrusion of the source electrode ~~the entirety of the protrusions of the source and drain electrodes~~ is formed within the area of the semiconductor layer[[,]] and ~~the protrusion of the source electrode~~ is parallel to and offset from the at least one protrusion of the drain electrode.

12. (Canceled)

13. (Original): The method as claimed in claim 11, wherein forming a semiconductor layer includes:

forming an active layer on the gate insulating film; and
forming an ohmic contact layer formed on the active layer.

14. (Original): The method as claimed in claim 12, wherein forming an ohmic contact layer produces a “”-shaped opening that corresponds to the shape of the channel.

15. (Original): The method as claimed in claim 13, wherein the active layer is formed from undoped silicon.

16. (Original): The method as claimed in claim 13, wherein the ohmic contact layer is formed from doped silicon.

17. (Currently Amended): The method as claimed in claim 11 [[12]], wherein the channel is formed with a length greater than 50 μm .

18. (Currently Amended): The method as claimed in claim 11 [[12]], wherein the channel is formed only over the gate electrode.

19. (Original): The method as claimed in claim 11, wherein forming a protective layer includes forming an opening that exposes the drain electrode.

20. (Original): The method as claimed in claim 19, wherein forming a pixel electrode include forming the pixel electrode in electrical communication with the drain electrode.

21-24. (Canceled)